

**WHAT IS CLAIMED IS:**

1. Use in preparation of a medicament for administration to a patient undergoing treatment with a statin cholesterol-lowering drug selected from atorvastatin, pravastatin, lovastatin, fluvastatin, simvastatin and cerivastatin to alleviate atherosclerosis in the patient and/or reduce serum lipid levels in the patient, of an aliquot of the patient's blood which has been stressed *ex vivo* with two or more stressors selected from an oxidative environment, thermal stress in the form of a temperature above or below normal body temperature and UV light.
2. Use as claimed in claim 1 wherein the aliquot of the patient's blood has a volume of from 0.2 - 100 ml.
3. Use as claimed in claim 1 or claim 2 wherein the blood aliquot has been *ex vivo* treated with an oxidative environment and UV light, optionally also with thermal stress.
4. Use as claimed in claim 3 wherein the oxidative stressor is a chemical oxidizing agent, applied to the blood aliquot simultaneously with the application of the UV light stressor.
5. Use as claimed in claim 4 wherein the chemical oxidizing agent is a gaseous mixture of ozone and oxygen, applied by bubbling through the blood aliquot while the aliquot is subject to incident UV light stressor.
6. Use according to claim 5 wherein the thermal stressor is applied to the blood aliquot simultaneously with the application of the ozone/oxygen gas mixture and the UV light.
7. Use as claimed in any preceding claim wherein the UV light stressor is UV light in the UV-C band wavelength.
8. Use as claimed in any preceding claim wherein the stressors are applied *ex vivo* to the blood aliquot for a period of from about 2 - 5 minutes.
9. Use according to any preceding claim wherein the patient's statin

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- cholesterol-lowering drug treatment is administration of atorvastatin, at a daily dosage of 5 - 200 mg.
10. Use according to any of claims 1-8 wherein the patient's statin cholesterol-lowering drug treatment is administration of pravastatin, at a daily dosage of 5 - 200 mg.
- 5 11. Use according to any of claims 1-8 wherein the patient's statin cholesterol-lowering drug treatment is administration of simvastatin, at a daily dosage of 5 - 200 mg.
12. Use according to any of claims 1-8 wherein the patient's statin cholesterol-lowering drug treatment is administration of fluvastatin, at a daily dosage of 5 - 200 mg.
- 10 13. Use according to any of claims 1-8 wherein the patient's statin cholesterol-lowering drug treatment is administration of lovastatin, at a daily dosage of 5 - 200 mg.
- 15 14. A combination treatment for slowing or arresting the progression and/or effecting the regression of atherosclerotic plaque deposits and/or improving the stability of such plaques in a mammalian patient, said combination treatment including the administration to the patient of a statin cholesterol-lowering drug and the administration to the patient of an aliquot of a patient's own blood which has been treated *ex vivo* with two or more stressors selected from an oxidative environment, thermal stress in the form of a temperature above or below normal body temperature and UV light.
- 20 15. The use of an aliquot of a patient's own blood which has been treated *ex vivo* with two or more stressors selected from an oxidative environment, thermal stress in the form of a temperature above or below normal body temperature, and UV light; and a statin cholesterol-lowering drug, for reducing serum lipid levels and/or combating development of atherosclerosis in a mammalian patient.
- 25 16. A process for enhancing the reduction in serum lipid levels in a mammalian patient caused by administration of a statin cholesterol-lowering drug, which comprises administering to the patient an
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aliquot of the patient's own blood which has been treated *ex vivo* with two or more stressors selected from an oxidative environment, thermal stress in the form of a temperature above or below normal body temperature and UV light and administering to the patient a cholesterol-lowering drug.

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